Original

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Telephone Number Portability	)	CC Docket No. 95-116
	)	RM 8535

COMMENTS OF GVNW INC./MANAGEMENT

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SUMMARY

While service provider portability may be viewed as essential for implementation of local competition, the Commission should carefully weigh the costs of such a requirement in relation to the expected benefits of local competition. Imposition of costs to provide service provider portability should not be imposed on rural areas until a competitor is ready to enter that rural market. Implementation schedules for number portability, if established, need to consider carefully the equipment requirements that will be imposed in rural areas to minimize additional costs that will be imposed on rural LECs. Implementation of location number portability will have profound impacts on telephone company switching, billing, and administrative systems. The Commission should not introduce location portability until better data is available on the demand for such services and the cost of providing them on a global basis.

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On July 13, 1995 the Commission released its Notice of Proposed Rulemaking (the NPRM) in this Docket requesting comments on numerous issues related to the desirability of and capabilities to provide various types of number portability. GVNW Inc./Management, a consulting company representing the interests of small local exchange companies (LECs),[1] offers the following initial comments in regard to the issues raised in the NPRM. Due to the scope of the subject material of the NPRM and, in many cases, the uncertainty of how technically the capabilities requested could be provided, there are a number of areas where we are unable to comment because of lack of relevant data. An absence of such comments should not be viewed as a lack of concern or interest in that area of inquiry.

SUMMARY OF COMMENTS

1. While service provider number portability may be viewed as critical to the successful implementation of local competition, the Commission should weigh carefully the potential benefits of local competition in relation to the additional costs that will be imposed on all local exchange carriers, particularly in rural areas, to provide this number portability.

[1] Attachment 1 includes a list of small local exchange companies that are clients of GVNW who have specifically requested GVNW to represent them in regard to national issues.

2. Just as many rural areas support at most only one gas station, grocery store, pharmacy, video rental outlet, and other customer service providers, there may exist only one local telecommunications service provider in rural areas for many years even though local competition in telecommunications may be authorized. In addition, the rural population tends to be less geographicaly mobile than people in urban and suburban areas. The demand for number portability may be slower in develeping in rural areas. Costs for providing service provider number portability capabilities to potential competitors should not be imposed on existing LECs until such time as there is a competitor that is serious about providing competitive service in these areas.

3. While small LECs generally attempt to keep pace with larger LECs in providing upgraded switching capabilities, the availability of new capabilities and features (such as AIN) are often not provided by manufacturers on switches used in small exchanges as quickly as they are provided in large switches used in metropolitan areas. Furthermore, small LECs, in order to save on switching costs, often implement generic upgrades to switches on a more infrequent schedule than many large LECs. Specific timetables for implementing any number portability proposals in rural areas need to take these factors into account to avoid imposing significant additional costs in these areas, particularly since there may be lower competitive activities in these areas.

4. Implementation of location number portability would have profound impacts on telephone company administrative, billing, information, switching, and operational systems. All these systems are based on and rely on the geographic location designated by the NPA-NXX code to organize records, identify customers, determine service types purchased, determine

jurisdictions of calls, and to determine both customer and access billing amounts. Elimination of the geographic nature of all telephone numbers would require complete replacement of or major modification in all of these systems in order to obtain the information that is currently obtained from the NPA-NXX code. It would also appear that full location number portability would also require the centralization of number assignments on a national basis, rather than making them at the individual company level.

ADVANTAGES AND DISADVANTAGES OF NUMBER PORTABILITY

The Commission tentatively concludes in the NPRM that "portability of telephone numbers benefits consumers of telecommunications services and would contribute to the development of competition among alternative providers of local telephone and other telecommunications services."[2] It appears to base this conclusion primarily on its observation that number portability "provides consumers personal mobility and flexibility in the way they use their telecommunications and because it fosters competition among service providers."[3] It further recognizes that it currently "lacks sufficient information on the costs (monetary and nonmonetary) of making telephone number portable either between service providers, services, or locations."[4]

We believe that the Commission should explore carefully the costs associated with such proposals. The Commission is encouraging local competition with the hope that it will provide substantial benefits to consumers in the form of lower rates and a wider variety of services. To

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[2] NPRM, Para. 7.

[3] NPRM, Para. 4.

[4] NPRM, Para. 7.

begin this process by imposing on telecommunications providers a substantial new cost to provide telephone number portability to the primary benefit of new competitors at the expense of existing companies and customers does not bode well for the prospects of achieving the objective of lower rates. The Commission must be aware that the financial and cost allocation changes which led to much of the reduction in telephone company access charges in the interstate jurisdiction that was then reflected in lower interstate toll charges will not be available to cause similar changes when competition is introduced in the local environment.[5] State public utilities commissions generally have pursued rate making strategies in their jurisdictions that allocated costs away from local residential rates.[6] Thus as competition is introduced and customer rates gravitate more toward the cost of providing service, residential local rates are likely to increase as a result of introducing competition rather than decrease as was seen at the introduction of interstate competition. Imposing additional costs for number portability may only exacerbate an already difficult situation where the introduction of competition results in price changes very different from that intended or expected.

The Commission should also note that while intangible benefits such as "customer mobility and flexibility" may result from the introduction of number portability, other intangible benefits may disappear as a result of that introduction. Customers are well accustomed to the geographic nature of telephone number assignments and use them to their advantage. Telephone

[5] Table 5.11 (p. 440) in the Monitoring Report, CC Docket No. 87-339, May, 1995 issued by the Federal and State Staff for the Federal-State Joint Board in CC Docket No. 80-286 shows that LEC access charges have dropped from an average of $0.173 per conversation minute to $0.057 per conversation minute from 1984 to 1995. This equates to a 67% reduction in LEC access rates per conversation minute. Contributing significantly to this decrease was the shift of costs from carrier common line charges to end user common line charges and changes in separations procedures for central office equipment which shifted significant costs from the interstate to intrastate jurisdictions.

[6] These strategies have included charging substantially more to business than residence customers for single party service, setting rates for toll and access services to recovery large portions of common costs and non-traffic sensitive loop costs, and charging higher rates for larger, denser calling areas than for calls in rural areas where costs are higher.

directories provide listings and maps of area codes so that customers may identify the areas where unfamiliar numbers are located and the area code of friends who have given their local number and location, but not the area code. References are also made to information listed in the directory that outlines by NXX code those codes within the local calling area so that customers will know whether they will be charged for the individual call or not. The 1+ code, required for dialing calls outside the local calling area, gives the customer notice that a charge will be forthcoming for the call. Implementation of this code in telephone company switches is based on the geographic NXX codes. If full location portability were implemented, another method other than 1+ would be necessary to inform customers of the cost of the call. This would probably be an announcement, that would at the least inform the customer of a toll charge, or , in the future, state the amount of the charge. This would slow call completion, and prove a nuisance on many calls that require a rapid completion, such as point of sale validation.

In some areas, particularly metropolitan areas, optional local calling plans for wider calling areas are dependent for implementation on the availability of separate NXX codes for customers subscribing vs. those not subscribing.[7] The geographic nature of the NXX codes provides telephone company switches and billing systems an inexpensive way to distinguish between the two customer groups and their different local calling areas. Customers also benefit from optional toll calling plans for specific geographic areas that are based on geographic NXX code assignments which customers can readily understand.[8] Finally, the lack of portability of numbers between NPAs allows customers to dial most local calls using a seven-digit dialing

[7] See for example the Metropolitan Calling Area service implemented by the Missouri Public Service Commission in its Report and Order in Case No. TO-92-306 In the matter of establishment of a plan for expanded calling scopes in metropolitan and outstate exchanges, issued December 23, 1992.

[8] See Ibid. for the establishment of Community Optional Service and Outstate Calling Service as examples of these types of calling plans.

pattern. Portability of numbers between NPAs would almost certainly require that all calls be made using a ten-digit calling pattern.

In assessing the desirability of number portability, particularly location portability, the Commission should also take note that each year a significant portion of the population of the United States changes residence locations.[9] While some of these moves are within a small enough area that the customers' existing telephone numbers may be used at the new location, a significant number of these moves require that the customers change not only their mailing address, but also their telephone number. Customers routinely do this with understanding of the need for the change. They contact their friends and relatives and communicate their new telephone number and address with little difficulty. The number of successful moves that are made without the need for number portability should raise questions regarding the need for location portability, for the majority of customers, particularly if the costs for providing location number portability are significant, as we believe they are.

IMPOSITION OF NUMBER PORTABILITY REQUIREMENTS IN RURAL AREAS

In pursuing the role of service provider number portability as a means to encourage local competition, the Commission should keep in mind that many other factors affect the introduction of competition in a given market. While number portability may encourage competition and make it easier for competitors to enter a market, other factors, such as the cost of providing service, the size of the market, the potential for market growth, etc. influence the entry of competition into that market. In rural areas where costs of providing service are relatively high

[9] A Census Bureau report issued September 11, 1995, reported that 16.7% of the nation's population changed residences in the twelve-month period ending March, 1994. This equates to about 43 million people moving. The report indicates that 6.7 million people moved to a different state and 8.2 million people moved to a different area in the same state. From "Americans staying put, study finds", Gazette Telegraph, September 12, 1995, p. A5.

and customer densities are low, competition is limited in the provision of many services. Small communities may have only a single grocery, gas station, pharmacy, video rental outlet, and in some cases may have none because the size of the market doesn't justify entry of a competing firm. There will be similar situations in telecommunications as well. Competitors will likely not come to some areas, not because service provider number portability is not available, but because the economics of the market do not justify competing providers. In its desire to stimulate competition where it may be appropriate and justified, the Commission should be careful to not impose service provider number portability requirements, adding to the cost of the provision of local service, until there is a need to provide such services. The imposition of such costs in an area where competitive entry is not justified will simply increase costs to the service provider and to consumers without increasing choices or providing better service. The Commission should avoid establishing any universal mandates for provisions of service number portability. Any such mandates should include exceptions for those areas where no competitors desire to provide service.

TIMETABLES FOR AND COSTS OF PROVIDING NUMBER PORTABILITY

With the uncertainty of what technologies might be used to implement various schemes of number portability and what areas such requirements might be imposed on, we are able to provide only limited estimates of costs for implementing such services. We note that the FCC's monitoring report for May, 1995 indicates that local calling for 1993 included 2.1 trillion dial equipment minutes.[10] Assuming half of these minutes are originating and an estimated call length of four minutes per call this would equate to 260 billion local calls per year. Using the

[10] Monitoring Report, op. cit., Table 4-5, p. 221.

current NECA query rate of $0.007 for interstate data base queries as indicative of the cost of queries for directing local calls, the cost for data base queries alone to direct these calls, assuming only one query per call, would be $1.8 billion per year. In addition to that there would be extensive additional costs for upgrading switching systems and extensive administrative costs for number assignments, directory publishing, billing system modifications, number administration, etc. As an example, upgrades to switches to provide SS7/A800 database service cost $50,000 to $200,000 per switch. Ii is probable that any database scheme to determine the geographic location at which to terminate a portable number will cost approximately the same amount per switch. At approximately 20,000 switches in the US, the total cost of switch upgrades would be $1.0 billion to $4.0 billion. Data links and database cost would be in addition to this, adding up to significant costs for a national implementation. Clearly it can be expected that the full implementation of location number portability will be an expensive proposition.

Of concern as well, is how these costs may be distributed, particularly when viewed on a per customer basis, between urban and rural areas. While the technologies to implement number portability are not certain, it would appear that they will use SS7 or subsequent signaling technology and possibly Advanced Intelligent Network (AIN) features. Costs of these technologies can be expected to be higher per customer or per call in small switches serving rural areas than they will be in urban switches. This situation would be aggravated if imposition of a rather short term time deadline for providing these capabilities required LECs to replace or upgrade switching systems on a faster timetable than normally anticipated. The manufacturer of at least one switching system that is in wide use in small offices has already indicated that AIN

capabilities will not be added to the existing switches.[11] In addition, small LECs generally do not upgrade switch generics as frequently as do the larger LECs. Even if switch capabilities can be added by generic upgrades to existing switches, the imposition of a specific timetable may cause significant added costs by moving the timetable for switch generic replacements forward. It also needs to be recognized that demand for features and capabilities using AIN technology will likely grow slower in rural areas and will make the economic introduction of such capabilities for features other than number portability later in time than they will be available in urban areas. Thus the number portability timetable could become the major or sole reason for investing in AIN capabilities.

IMPACT OF LOCATION PORTABILITY

In viewing the impact of the implementation of location portability (and to a lesser extent service provider portability) the Commission cannot ignore the significant effect that such implementation will have on current switching, operational, and administrative systems. Listed below are some of the changes that would seem to be occasioned by such implementation:

1. Additional directory costs to accommodate printing ten-digit telephone numbers for all listings.

2. Restructuring of directory assistance services on some basis other than area codes.

3. National coordination of number assignments for all telephone numbers. Number assignments could no longer be made by the company assigned an NPA-NXX.

4. Coordination of a two-tiered number assignment for each customer (one for the customer identification and one for the network address).

[11] Stromberg Carlson has informed customers that AIN capabilities will not be made available on existing DCO switches.

5. Network and switching modifications to distinguish between customer identification and network address numbers.

6. Development and implementation of some system to replace 1+ as the identification of calls to be charged on a toll basis.

7. Modification to and development of alternative methods of identifying distances for toll and access billing. This may entail real-time queries between billing and network systems to provide network numbers for billing purposes.

8. Modification of customer and carrier billing systems to accommodate a new method of identifying the jurisdiction (state/interstate, interLATA/intraLATA) of calls to replace the current identification by customer geographic numbers.

9. Modification of systems for billing third-number and telephone number based calling cards to direct them to the appropriate originating carrier.

Identification of the costs of making these changes and implementing revised procedures cannot be provided since there is too much uncertainty as to how they might be accomplished and the technology that would be required to implement them. It is certain, though, that the costs will be extensive and burdensome. It would be well for the Commission to move slowly into this project to assure that it does not place unnecessary economic burdens on customers of telephone service for capabilities which they may not want of need.

Implementation of location portability should start with optional numbers such as 800- and 500- numbers which give individual customers the option of gaining a non-geographic number and paying for the costs of such implementation. Demand for such services can be

gauged by the demand for these services to determine whether such capabilities should be extended to all numbers.

CALL PROCESSING SCENARIOS

While we have not had the opportunity to study in detail the call processing scenarios described in the NPRM,[12] it would appear from the descriptions given that only the Originating Service Provider (OSP) scenario would be applicable in a location portability situation. Both the terminating access provider (TAP) and the N-1 scenarios assume that an initial determination can be made at the originating end of the call as to whether it is local or not and how it should initially be directed.[13] However, in a location portability scenario one cannot determine whether a call is local, intraLATA, or interLATA until the data base is queried to determine the actual terminating location of the call. It would appear, then that only the OSP scenario, which requires

[12] NPRM, paras. 43-47.

[13] See NPRM, paragraph 44 for the TAP scenario, "With a local telephone call the call would be routed..." and "An interLATA call also would be initially routed by the IXC..." and NPRM, paragraph 46 for the N-1 scenario, "When a call is placed to a local telephone number, the originating service provider becomes the N-1 carrier."

flash-cut implementation across the country,[14] can be used to implement a location portability scenario.[15]

Respectfully Submitted,

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[14] See NPRM, para. 45.

[15] The assumption in these paragraphs that such determination can be made by the number shows how ingrained the notion of geographic numbers is and how difficult it will be to educate customers on the use of non-geographic numbers.

CERTIFICATE OF SERVICE

I, Nicola A. Chenosky, do hereby certify that on this 12th day of September, 1995, copies of the foregoing **Comments of GVNW Inc./Management** were hand delivered to the parties listed below.

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